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IN THE UNITED STATES DISTRICT COURT FOR THE
NORTHERN DISTRICT OF OKLAHOMA

W. A. DREW EDMONDSON, in his)
capacity as ATTORNEY GENERAL)
OF THE STATE OF OKLAHOMA and)
OKLAHOMA SECRETARY OF THE)
ENVIRONMENT C. MILES TOLBERT,)
in his capacity as the)
TRUSTEE FOR NATURAL RESOURCES)
FOR THE STATE OF OKLAHOMA,)
Plaintiff,)
vs.) 4:05-CV-00329-TCK-SAJ
TYSON FOODS, INC., et al,)
Defendants.)

VOLUME I OF THE VIDEOTAPED
DEPOSITION OF ALEX HORNE, PhD, produced as a
witness on behalf of the Plaintiff in the above
styled and numbered cause, taken on the 5th day of
March, 2009, in the City of Tulsa, County of Tulsa,
State of Oklahoma, before me, Lisa A. Steinmeyer, a
Certified Shorthand Reporter, duly certified under
and by virtue of the laws of the State of Oklahoma.

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A P P E A R A N C E S

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(Via phone)
ALSO PRESENT: Dr. Dennis Cooke

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I N D E X

W I T N E S S

P A G E

ALEX HORNE, PhD

Direct Examination by Mr. Page

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Signature Page

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Reporter's Certificate

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1 (Whereupon, the deposition began at

2 8:56 p.m.)

3 VIDEOGRAPHER: We are now on the Record for
4 the deposition of Dr. Alex Horne. Today is March
5 5th, 2009. The time is 8:56 a.m. Counsel, would
6 you please identify yourselves for the Record?

08:56AM

7 MR. PAGE: David Page for the State of
8 Oklahoma, and with me here today is Dr. Cooke.

9 MR. GRAVES: James Graves for George's and
10 George's Farms and also Bassett for the same
11 clients.

08:56AM

12 MR. McDANIEL: Scott McDaniel for Peterson
13 Farms.

14 MS. HILL: Theresa Hill for the Cargill
15 defendants.

08:57AM

16 VIDEOGRAPHER: Thank you. You may swear in
17 the witness.

18 ALEX HORNE, PhD
19 having first been duly sworn to testify the truth,
20 the whole truth and nothing but the truth, testified
21 as follows:

22 DIRECT EXAMINATION

23 BY MR. PAGE:

24 Q Dr. Horne, my name is David Page and I
25 represent the State of Oklahoma. Would you please

08:57AM

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1 that in modern times, which I define as somewhere
2 between 2001 and 2008, that period, 2001 onwards to
3 whatever modern date that we have. In other parts
4 of the report I talk about what happened in other
5 times that aren't covered by that period, the '60s 09:25AM
6 or mid '70s and later, but the main conclusions I
7 wanted to see is, is it different now from what it
8 was then. If eutrophication has occurred and it's
9 gone along, is it worse now than it was in the old
10 days. 09:26AM

11 Q And what was your basic conclusion on that --
12 I'll call it your first key opinion?

13 A Yeah. My basic conclusion was, no, there was
14 no what I call ecologically significant difference
15 between the six or seven indicators of trophic 09:26AM
16 condition that I used between the early period, the
17 '60s to '74, and the modern times, 2001 onwards.

18 Q Can I ask you a question? You mentioned the
19 modern times to be 2001 through 2008 time period?

20 A Yes. 09:26AM

21 Q What data did you review for 2008?

22 A I went on the lake in 2008, and the data I
23 looked at was more or less what I could see.

24 Q But part of your analysis includes 2008 data
25 that you collected through your eyeballs so to 09:27AM

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1 speak?

2 A Well, I also collected some algae samples.

3 Q Okay, and I want to go into that in a minute.

4 A Yeah.

5 Q But -- but I want to understand that part of 09:27AM
6 your analysis and opinion is based on data you
7 collected or observations that you made --

8 A Yes.

9 Q -- in 2008; correct?

10 A Yes. 09:27AM

11 Q On Lake Tenkiller?

12 A Yes.

13 Q Thank you, sir. Okay. You were saying that
14 you've come to the opinion that there has not been
15 an ecologically significant change in trophic 09:27AM
16 status; is that your opinion, sir?

17 A Yes.

18 Q And it's based on, I think you said, some
19 different indicators that you evaluated?

20 A Yes. 09:27AM

21 Q Okay. Would you summarize those indicators
22 for us, please?

23 A The indicators I used were partially based on
24 those that were in the Cooke and Welch report
25 because that's the foundation document that I was 09:27AM

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1 reviewing here. I wasn't setting up an independent
2 study of my own. I was reviewing a document, and to
3 some extent, you supplemented that with other
4 measurements, but my primary task was to review the
5 expert report of Drs. Cook and Welch, and the
6 indicators I used were chlorophyll, dissolved
7 oxygen.

09:28AM

8 Q Let me ask about chlorophyll. Just to make
9 sure everybody understands, we're learning -- I'm
10 sure Mr. Bassett and Mr. -- well, counsel, all the
11 counsel for the defendants are becoming amateur
12 limnologists, but when we talk chlorophyll, what do
13 you mean by that indicator?

09:28AM

14 A Technically the indicator is the green pigment
15 chlorophyll and primary chlorophyll-a, which is the
16 major pigment that most algae use for
17 photosynthesis, extracted in some way from the algae
18 in a sample of water.

09:28AM

19 Q Okay. So to make sure we're speaking the same
20 language so to speak, when you look at chlorophyll
21 as an indicator, are you looking at total biomass,
22 looking at changes in biomass over time as your
23 indicators?

09:29AM

24 A Chlorophyll is a good approximation of
25 biomass. It's not the best measurement of biomass

09:29AM

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C E R T I F I C A T E

STATE OF OKLAHOMA)
) ss.
COUNTY OF TULSA)

I, Lisa A. Steinmeyer, Certified
Shorthand Reporter within and for Tulsa County,
State of Oklahoma, do hereby certify that the above
named witness was by me first duly sworn to testify
the truth, the whole truth and nothing but the truth
in the case aforesaid, and that I reported in
stenograph his deposition; that my stenograph notes
were thereafter transcribed and reduced to
typewritten form under my supervision, as the same
appears herein.

I further certify that the foregoing 292
pages contain a full, true and correct transcript of
the deposition taken at such time and place.

I further certify that I am not attorney
for or relative to either of said parties, or
otherwise interested in the event of said action.

WITNESS MY HAND AND SEAL this 12th day
of March, 2009.

LISA A. STEINMEYER, CRR
CSR No. 386

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